



IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Underground Storage Tank Program

Elaine Douskey

Carlisle



This undated
standing in front

This undated picture shows Earl "Corky" Adamson standing in front of Smith's DX station. The picture is undated, but Corky appears to be a teenager.

The station stood at the corner of 5th Street and Hiway 5 where P&E Engineering now stands.

This article, dated March 6, 1962, is from a scrapbook compiled by Blanche Lanning. The scrapbook can be found in the Carlisle Library.

"CARLISLE, IA.

Fire, originating from a gasoline explosion, destroyed Smith's DX Service Station on Highway 60.

John R. Smith, owner and operator of the station for 30 years, said he was running gasoline from a transport truck into the service station's underground tank at 7:40 a.m. The tank ran over and some of the gasoline ran into the service station basement.

Smith ran to the basement, shut off the oil furnace and rushed upstairs to get a garden hose to wash away the spilled gasoline. 'Just then there was an explosion,' he said.

The Carlisle fire department fought the blaze for three hours but the building burned to the ground.

Smith, and his son-in-law, Glenn Crum, succeeded in moving the gasoline transport truck away from the station and in getting an auto that was being serviced out of the station garage.

Smith also was able to carry out the station cash register containing about \$500.

Smith set his loss at \$35,000 only a small portion of which was covered by insurance."

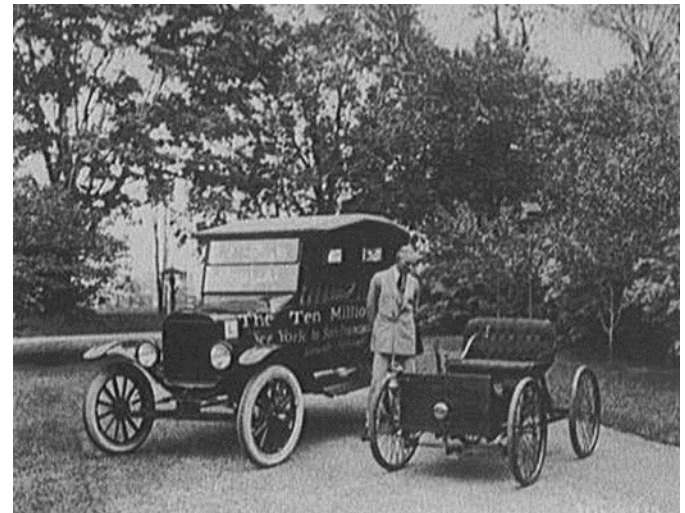
ason
re is



History - Federal

- 1984 – Subtitle I added to Solid Waste Disposal Act (SWDA): Comprehensive regulations for USTs – operational standards, corrective actions, financial responsibility.
- 1988 – EPA enacts regulations setting standards for new USTs and requiring old USTs to be closed or upgraded.
- 2005 - UST Compliance Act (from the Energy Policy Act 2005): substantial provisions aimed at leak prevention.
- 2015 – Federal rules adopted to implement UST provisions of the Energy Policy Act.
 - Secondary Containment
 - Delivery Prohibition
 - Compliance Inspections
 - Operator Training
 - Biofuel Compatibility
 - Regulation of previously deferred USTs
 - Equipment Testing
 - Walkthrough Inspections

<http://www.mtfca.com/discus/messages/118802/153665.jpg>



History – State

- 1985 – Iowa Legislation on USTs (Iowa Code 455B) - comprehensive UST regulations: operational standards, corrective actions, FR, registration
- 1987 - Groundwater Protection Act.
 - registration fee for USTs - revenue for gw protection
 - UST upgrade standards, emphasis on leak prevention
- 1991 - Legislation for groundwater professionals, UST installers and inspectors
- 2005 - Third-party compliance inspectors / biennial inspections statute
- 2007 - Legislation to implement Federal Energy Policy Act UST provisions:
Secondary Containment, Fuel Delivery Prohibition, Inspections, Operator Training requirements
 - Licensing of UST professionals by DNR
- 2016 - DNR begins revising rules to implement federal rule provisions
Chapters 134, 135, 136

Rulemaking Schedule



Notice of
Intended Action:

EPC approval
Nov 17, 2020



Public Hearings:

Jan 6, 7, 8, 2021



Final Rule:

EPC approval
April 20, 2021

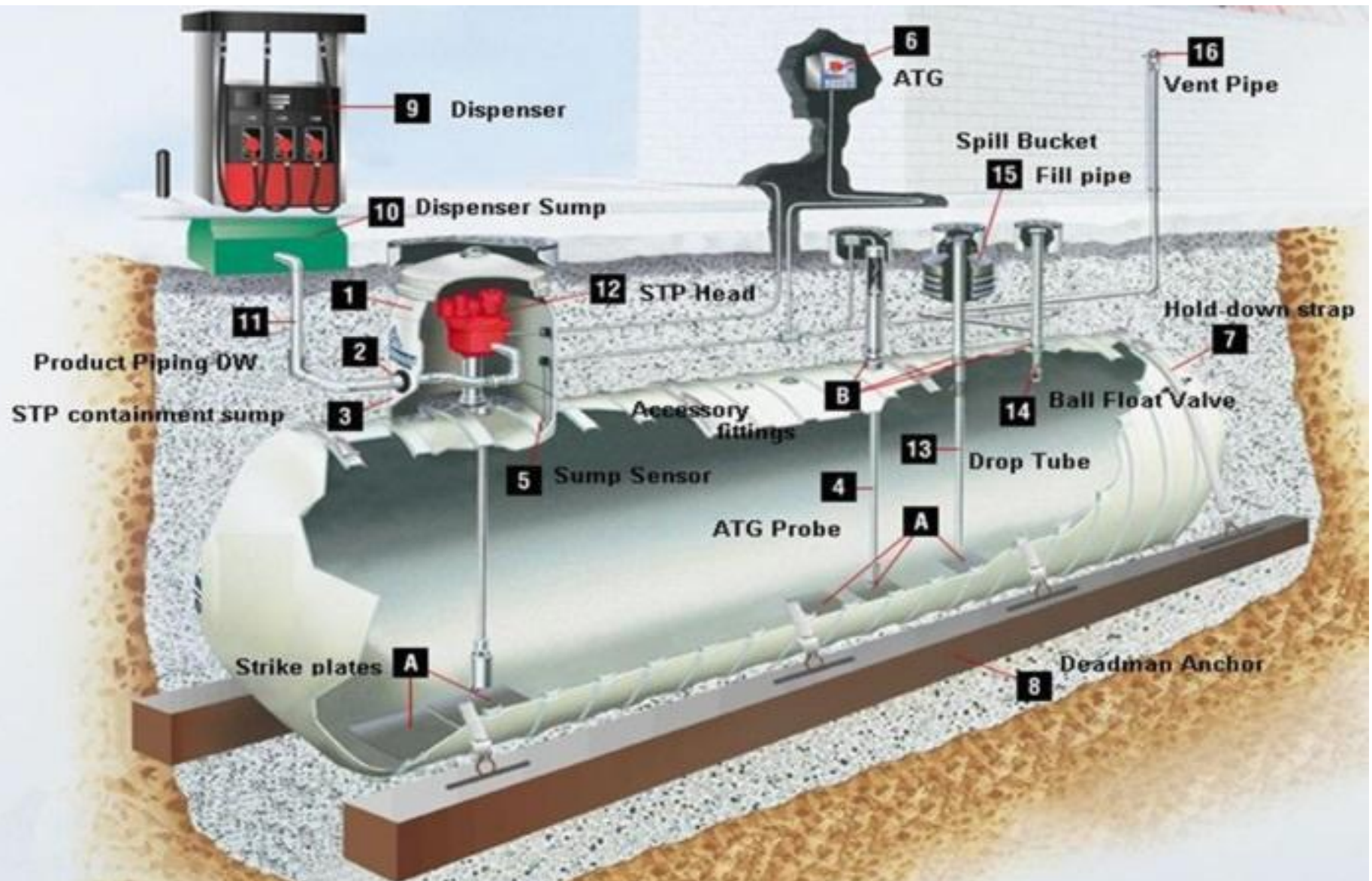


Effective Date:

June 23, 2021



Anatomy of a UST system



Iowa's UST Universe

- Facilities: 2,492
- Tanks: 6,443
- Compartments: 7,804
- EPA measures - Rate of Significant Operational Compliance (based on 1127 inspections completed during the past year):
 - Release Prevention (spill, overfill, CP) = 89%
 - Release Detection (piping & tanks) = 69%
 - Combined (Prevention & Detection) = 64%
- Confirmed releases: 33

Draft Rules – Chapter 135

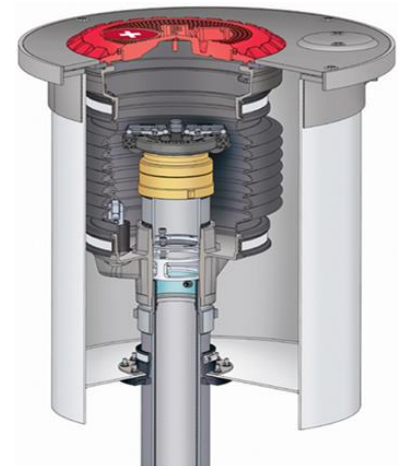
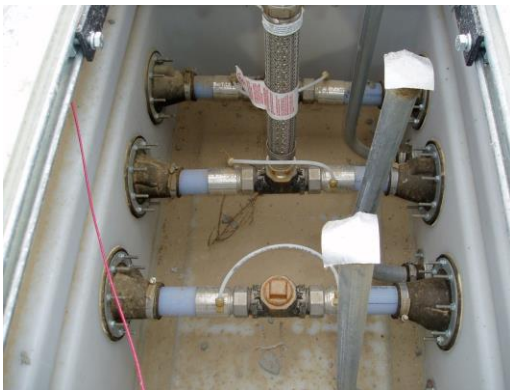
Federal Requirements:

- Operator Training (implemented)
- Secondary Containment (implemented)
- UST compatible with product stored (implemented)
- Spill Prevention Equip Test (every 3 yrs)
- Containment Sump Test (every 3 yrs)
- Overfill Prevention Inspection (every 3 yrs)
- Annual Release Detection Test
- Monthly and Annual Walkthrough Inspections

Spill Prevention & Containment Sump Testing [135.4(12)]

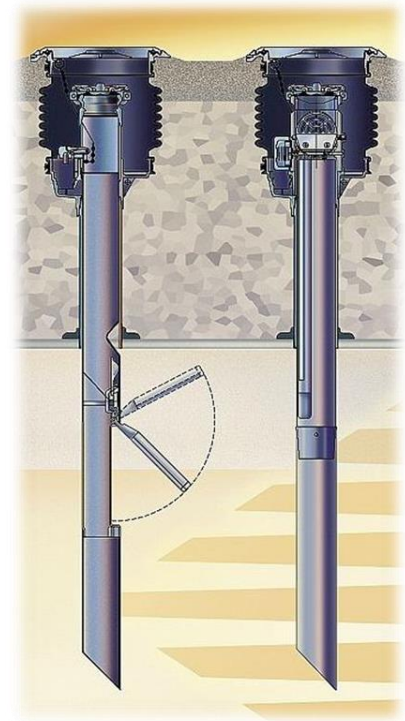
- Containment sumps used for interstitial monitoring of piping* & spill buckets must meet one of the following:
 - Equipment is double walled and the integrity of both walls is monitored every 30 days (spill buckets) / annually (sumps); or
 - Spill prevention equipment and containment sumps are tested every three years to ensure the equipment is liquid tight by using vacuum, pressure, or liquid testing.

** Applies only to secondary containment installed after 11.28.2007*



Overfill Prevention Inspection [135.4(12)]

- Ensure that overfill prevention equipment is set to activate at the correct level in the tank (as specified in 135.3(1)"c")
- Ensure equipment will activate when regulated substance reaches that level
- Follow accepted protocols



Annual Release Detection Test [135.5(1)]

A test must be performed to ensure equipment is operating properly. Specific to the facility, the test must cover:

1. Automatic tank gauge and other controllers: test alarm; verify system configuration; test battery backup;
2. Probes and sensors: inspect for residual buildup; ensure floats move freely; ensure shaft is not damaged; ensure cables are free of kinks and breaks; test alarm operability or running condition and communication with controller;
3. Automatic line leak detector: test operation to meet criteria in 135.5(5)"a" by simulating a leak;
4. Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller; and
5. Hand-held electronic sampling equipment associated with groundwater and vapor monitoring: ensure proper operation.

Walkthrough Inspections [135.4(13)]

- Monthly Walkthrough Inspections
 - (1) Spill prevention equipment - visually check for damage; remove liquid or debris; check for and remove obstructions in the fill pipe; check the fill cap to make sure it attaches securely on the fill pipe and gasket is in good condition; and, for double walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area, and
 - (2) Release detection equipment - check to make sure the release detection equipment is operating with no alarms or other unusual operating conditions present; and ensure records of release detection testing are reviewed and current

LIQUID STATUS

NOV 1, 2004 1:30 PM

L 1:ANNULAR DIESEL 1
SENSOR NORMAL

L 2:SUMP DIESEL 1
SENSOR NORMAL

L 3:ANNULAR D2 TANK 2
SENSOR NORMAL

L 4:SUMP D2 TANK 2
FUEL ALARM

L 5:ANNULAR D2 TANK 3
SENSOR NORMAL

L 6:SUMP D2 TANK 3
FUEL ALARM

Walkthrough Inspections [135.4(13)]

- Annual Walkthrough Inspections
 - (1) Containment sumps - visually check for damage, leaks to the containment area, or releases to the environment; remove liquid (in contained sumps) or debris; and, for double walled sumps with interstitial monitoring, check for a leak in the interstitial area, and
 - (2) Hand held release detection equipment - check devices such as tank gauge sticks or groundwater bailers for operability and serviceability.



Implementation Dates...

REQUIREMENT:	WHEN:	ALSO:
Installation of Secondary Containment Interstitial monitoring as primary LD	Now (implemented 11/28/2007)	
UST System Compatible with Products	Now (implemented)	-At installation -When changing products (>E10 and >B20)
Spill Prevention Test	First Test by October 13, 2021	-Every 3 years -At installation -Within 30 days after repair / replacement
Overfill Prevention Inspection	First Inspection by October 13, 2021	-Every 3 years
Containment Sump Test * For equipment installed after 11.28.07 *	First Test by October 13, 2021	-Every 3 years -At installation -Within 30 days after repair / replacement
Annual Release Detection Test	Beginning October 13, 2021 (i.e., first test by October 13, 2022)	-May complete at time of annual walkthrough inspection
Monthly Walkthrough Inspections	Upon adoption (i.e., first monthly walkthrough within 30 days after 6/23/21)	
Annual Walkthrough Inspections	Upon adoption (i.e., first annual walkthrough within 1 year after 6/23/21)	

George Preston Filling Station, Belle Plaine, Iowa

Built in 1919



Draft Rules – Chapter 134

Licensing Requirements:

- Defines “UST Professional”
- UST Compliance Inspectors – qualification options
- Installation Inspectors – 2 years of experience (vs. 1)
- Requires 8 hours of CEUs (reduced from 12)
- Changed the qualifying passing grade for licenses to 75%
- Renewal applications due December 1 (vs November 1)
- UST Testers – qualification options
- Defines who can perform testing (e.g., secondary containment, spill and overfill)



UST Compliance Inspectors



- Initial qualifications - must meet one of the following: (new)
 - Is an Iowa-licensed installer;
 - Is an Iowa-licensed installation inspector;
 - Has participated on at least 50 on-site compliance inspections with an Iowa-certified compliance inspector;
 - Has two years of experience - with petroleum equipment including installations, maintenance or testing; or
 - Other relevant experience approved by the department.
- Attends the required training. Temporary Exception: (new)
 - If the training is not offered within 60 days, applicant may still be issued a license. Applicant must meet all other qualifications, and must attend the next available training event.
 - Under temporary training exception:
 - All compliance inspection activities are conducted under the supervision of a trained Iowa-certified compliance inspector. ...Supervision does not mean being on site for compliance inspections.
 - The trained Iowa certified compliance inspector must co-sign compliance inspections conducted by the inspector who has not completed the required training.
- Initial and Renewal fees - \$200 (new)
- Renewal: must complete 12 inspections every 2 years (reduced from 25)

Responsibilities of Installers

New – Testing of UST Equipment

- Spill prevention equipment, containment sumps and UDC at new installations must be tested ... Acceptable test methods include **vacuum, pressure or liquid testing** used in accordance with requirements developed by the manufacturer, a code of practice, or methods determined by the DNR to be no less protective. Licensed installers may also perform periodic testing of spill and overfill devices, containment sumps.
- Documentation: Installing a new UST system or upgrading a UST system requires an installer to submit the DNR forms and testing documents applicable to the installation, signed by the owner, to the department **no later than 30 days after the final 3rd party inspection** or 30 days after completion if no inspection is required.

UST Testers

Initial qualifications: *(new)*

- Current manufacturer certification(s) for equipment being used for testing; and
- Experience as documented by at least one of the following:
 1. One year of relevant experience.
 2. Has completed at least 80 on-site tests with an Iowa-licensed tester.
 3. Other relevant experience as approved by the department.

UST Testers



- Responsibilities of Testers

- The licensed tester is responsible for testing tanks, lines, leak detection systems, or monitoring systems. An owner, operator or their employee performing leak detection or cathodic protection monitoring is not a tester.
- A licensed tester may also perform periodic testing of spill prevention equipment, overfill devices and containment sumps as required by 567—Chapter 135(455B).
- EXCEPTION *(new)*: .. a person conducting periodic testing of spill prevention equipment, containment sumps and UDC need not be licensed if that person is under the supervision of an individual licensed under Chapter 134, Part B or Part C when conducting those tests.

Proposed UST Rule Changes

www.iowadnr.gov/ust



[DNR Online Services](#) | [Subscribe to Email Updates](#)
[Iowa Outdoors Magazine](#) | [News](#) | [Events](#) | [Contact Us](#)

Google Custom Search



[HOME](#)

[HUNTING](#)

[FISHING](#)

[THINGS TO DO](#)

[PLACES TO GO](#)

[CONSERVATION](#)

[ENVIRONMENTAL PROTECTION](#)

[ABOUT DNR](#)

UST / LUST REGULATIONS

[ENVIRONMENTAL PROTECTION](#) > [LAND QUALITY](#) > [UNDERGROUND STORAGE TANKS](#) > [UST / LUST REGULATIONS](#)

[Air Quality](#)

[Land Quality](#)

> [Emergency Planning \(EPCRA\)](#)

> [Solid Waste](#)

> [Waste Planning & Recycling](#)

> [Underground Storage Tanks](#)

> [UST / LUST Regulations](#)

> [UST / LUST News & Events](#)

> [UST / LUST Resources](#)

> [UST Owners & Operators](#)

> [UST Enforcement](#)

> [UST Forms](#)

> [Licensed UST Professionals](#)

> [Leaking Underground Tanks](#)

UST / LUST Regulations

Code of Iowa

[Chapter 455B](#) [PDF](#) - Jurisdiction of Department of Natural Resources

UST Administrative Rules

The Underground Storage Tank (UST) section is governed by the Iowa Administrative Code (IAC).

Chapter 134 is divided into Parts A (Certification of Groundwater Professionals), B (Certification of UST compliance Inspectors), and C (Licensing of UST Professionals) to aid the reader in finding these specific sections.

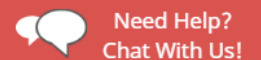
- [Chapter 120](#) [PDF](#) - Land farming of Petroleum Contaminated Soil
- [Chapter 133](#) [PDF](#) - Rules for Determining Cleanup Actions and Responsible Parties
- [Chapter 134](#) [PDF](#) - Underground Storage Tank Licensing and Certification Programs
 - [Chapter 134, Part A](#) [PDF](#) - Certification of Groundwater Professionals
 - [Chapter 134, Part B](#) [PDF](#) - Certification of UST Compliance Inspectors
 - [Chapter 134, Part C](#) [PDF](#) - Licensing of UST Professionals
- [Chapter 135](#) [PDF](#) - Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks
- [Chapter 136](#) [PDF](#) - Financial Responsibility for Underground Storage Tanks

Proposed Administrative Rules or Rule Revisions

Chapter(s) involved: 567 IAC Chapter 134 - Underground Storage Tank Licensing and Certification Programs; 567

Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks

[Chapter 136](#) - Financial Responsibility for Underground Storage Tanks





IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Underground Storage Tank Program